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Subject: BCT action item re ST012 figures and sampling frequency
Attachments: Figure1_CZ_Benzene_WithPrevious.pdf; Figure3_LSZ_Benzene_WithPrevious.pdf; Figure2_UWBZ_Benzene_WithPrevious.pdf; smime.p7s

BCT members -

Phil and I are still actively working on with our Air Force team on the contractual details needed in order to provide a response to the request for additional ST012 perimeter wells in downgradient locations. We are hoping to have a plan to present to you soon to minimize the delay in starting the Pilot Study injection, and will keep you posted.

As a follow-up to action items identified in the July 2018 BCT ST012 conference call, please see the information below and the attached figures.

The figures from the July 2018 ST012 presentation have been revised to include the most recent sampling results. Please note that the revised figures support the AF data interpretation that with the exception of CZ23 (April 2018) in the CZ, the current downgradient benzene plume in the UWBZ and LSZ is defined for most recent data. Additionally, based on historical data previously presented to the BCT, the CZ, UWBZ and LSZ downgradient benzene plume has been defined since July 2016. As verbally presented in the July BCT conference call, the most recent sampling (July 2018) of CZ23 indicates a reduction in benzene concentration of approximately 60% (97 ppb in April vs 38 ppb [preliminary result] in July). The April 2018 CZ23 result is still indicated on the attached figure. The AF will continue groundwater extraction at CZ07 which appears to be having a positive effect on minimizing downgradient migration of benzene at CZ23. CZ23 will continue to be sampled monthly.

With regards to perimeter well sampling frequency, following completion of Phase 1 additional characterization at ST012 in November 2016, downgradient perimeter wells in the CZ, UWBZ, and LSZ were sampled on a four to six week basis for approximately six months. The results of the monthly sampling indicated that the downgradient benzene plume was defined in the CZ, UWBZ, and the LSZ. Based on the six month data set, the sampling frequency was modified to quarterly for the last six months of 2017. The results of the quarterly sampling indicated that the downgradient benzene plume was defined in the CZ, UWBZ, and LSZ. During the first quarter of 2018 (Feb 2018), the informal dispute between the EPA and AF was resolved resulting in the finalization of the Pilot Study Implementation Work Plan (Work Plan) which then took precedence over the existing quarterly perimeter well monitoring. This Work Plan presents the re-baseline sampling protocol for the site with a focus on implementation of the pilot study and did include some but not all of the downgradient perimeter wells. The downgradient perimeter wells not selected for sampling in the work plan re-baseline sampling were perimeter wells that have been sampled since the 2009/2010 time frame and have had no benzene detections above the MCL. In other words, a significant benzene data set already existed indicating downgradient benzene definition at these locations. The fact that several of the perimeter wells were not sampled as part of the re-baseline sampling as per the Work Plan does not compromise the interpretation of the downgradient benzene plume in the CZ, UWBZ, and LSZ. As indicated in the Work Plan, all downgradient perimeter wells were scheduled to be sampled quarterly following initiation of sulfate injections.

Currently, the following downgradient perimeter wells are in the process of being sampled:

CZ: C02

UWBZ: U02, U37, U38, RB-3A

LSZ: W34, W38, W24

Following completion of the above perimeter well sampling, the following perimeter wells will be sampled in August to obtain a current data set (quarterly) for the downgradient perimeter wells during the temporary halt in Pilot study injection.

CZ: CZ24, CZ25

UWBZ: UWBZ38

LSZ: LSZ53, LSZ54, LSZ55

Please contact Don or me if you have questions.

Thank you.

Cathy

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